

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION
SPONSORED PROJECT INITIATION

Date: 6/14/80

Project Title: Initial Allotment Grant for the Georgia Mining and Mineral Resources Institute

Project No: E-19-584 (sub-project is E-18-584/Pentecost/Cer. Engineering)

Project Director: Dr. John E. Husted

Sponsor: U. S. Department of the Interior, Office of Surface Mining;
Washington, D. C. 20240

Agreement Period: From 12/4/79 Until 2/3/80

Type Agreement: Allotment Grant No. G5104003

Amount:	\$102,239	Sub-project:	\$ 7,761 (E-18-584)	Totals:	\$110,000
	<u>57,340</u> GIT (E-19-218)		<u>52,660</u> GIT (E-18-218)		<u>110,000</u> GIT
	<u>\$159,579</u> Total		<u>\$60,421</u> Total		<u>\$220,000</u>

Reports Required: Quarterly Technical & Financial Status Reports; Final Technical & Financial Status Report

Sponsor Contact Person (s):

Technical Matters

Dr. Lawrence Chase
U. S. Department of the Interior
Office of Surface Mining
1951 Constitution Avenue, N. W.
Washington, D. C. 20240

(202) 343-6912

Contractual Matters

(thru OCA)

Mr. Charles McNulty
U. S. Department of the Interior
Office of Surface Mining
1951 Constitution Avenue, N. W.
Washington, D. C. 20240

(202) 343-4926

Defense Priority Rating: None

Assigned to: Chemical Engineering (School/Laboratory)

COPIES TO:

Project Director
Division Chief (EES)
School/Laboratory Director
Dean/Director—EES
Accounting Office
Procurement Office
Security Coordinator (OCA)
L Reports Coordinator (OCA)

Library, Technical Reports Section
EES Information Office
EES Reports & Procedures
Project File (OCA)
Project Code (GTRI)
Other OCA Research Property Coordinator

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION
SPONSORED PROJECT TERMINATION

Date: 4/13/81

Project Title: Initial Allotment Grant for the Georgia Mining and Mineral
Resources Institute

Project No: E-19-584 (sub-project is E-18-584/Pentecost)

Project Director: Dr. John E. Husted

Sponsor: U. S. Department of the Interior, Office of Surface Mining;
Washington, D. C. 20240

Effective Termination Date: 2/3/81

Clearance of Accounting Charges: 5/3/81 (Reporting)

Grant/Contract Closeout Actions Remaining:

- ☐ Final Invoice and Closing Documents
- ☒ Final Fiscal Report (SF 269)
- ☐ Final Report of Inventions
- ☒ Govt. Property Inventory & Related Certificate
- ☐ Classified Material Certificate
- ☐ Other _____

NOTE: THE INVENTORY OF NON-EXPENDABLE PROPERTY SHOULD
ACCOMPANY THE FINAL FINANCIAL STATUS REPORT.

Assigned to: Chemical Engineering

(School/Department)

COPIES TO:

Administrative Coordinator
Research Property Management
Accounting Office
Procurement Office
Research Security Services
~~Reports~~ Coordinator (OCA)

Legal Services (OCA)
Library, Technical Reports
EES Research Public Relations (2)
Project File (OCA)
Other: _____

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION
SPONSORED PROJECT INITIATION

Date: 6/14/80

Project Title: Initial Allotment Grant for the Georgia Mining and Mineral Resources Institute

Project No: E-18-584 (sub-project under E-19-584/Husted)

Project Director: Dr. J. L. Pentecost

Sponsor: U. S. Department of the Interior, Office of Surface Mining; Washington, D. C.
20240

Agreement Period: From 12/4/79 Until 12/3/80

Type Agreement: Allotment Grant No. G5104003

Amount: \$ 7,761
52,660 GIT (E-18-218)
\$60,421 Total

Reports Required: Submitted under E-19-584

Sponsor Contact Person (s):

Technical Matters

Contractual Matters
(thru OCA)

Dr. John E. Husted
Director, Mineral Institute
School of Chemical Engineering
Georgia Tech
Campus

Defense Priority Rating: None

Assigned to: Ceramic Engineering (School/Laboratory)

COPIES TO:

Project Director
Division Chief (EES)
School/Laboratory Director
Dean/Director—EES
Accounting Office
Procurement Office
Security Coordinator (OCA)
✓ Reports Coordinator (OCA)

Library, Technical Reports Section
EES Information Office
EES Reports & Procedures
Project File (OCA)
Project Code (GTRI)
Other OCA Research Property Coordinator
Dr. J. E. Husted

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION
SPONSORED PROJECT TERMINATION

Date: 4/13/81

Project Title: Initial Allotment Grant for the Georgia Mining and Mineral Resources Institute

Project No: E-18-584 (Sub-project under E-19-584/Husted)

Project Director: Dr. J. L. Pentecost

Sponsor: U. S. Department of the Interior, Office of Surface Mining; Washington, D. C. 20240

Effective Termination Date: 2/3/81

Clearance of Accounting Charges: 5/3/81 (Reporting)

Grant/Contract Closeout Actions Remaining:

None; submitted under E-19-584

- ☐ Final Invoice and Closing Documents
- ☐ Final Fiscal Report
- ☐ Final Report of Inventions
- ☐ Govt. Property Inventory & Related Certificate
- ☐ Classified Material Certificate
- ☐ Other _____

Assigned to: Ceramic Engineering (School/~~Laboratory~~)

COPIES TO:

Administrative Coordinator
Research Property Management
Accounting Office
Procurement Office
Research Security Services
~~Reports~~ Coordinator (OCA)

Legal Services (OCA)
Library, Technical Reports
EES Research Public Relations (2)
Project File (OCA)
Other: _____

E19-584

GEORGIA INSTITUTE OF TECHNOLOGY
ATLANTA, GEORGIA 30332

GEORGIA MINING AND MINERAL RESOURCES INSTITUTE
COLLEGE OF ENGINEERING

July 28, 1980

Office of Surface Mining and Reclamation
Grants Administration Unit
1951 Constitution Avenue
Washington, D. C. 20240
Attn: TISC

Gentlemen:

Enclosed please find reports for the period April 1, 1980
through June 30, 1980.

Sincerely,

John E. Husted
Director

JEH/ss



U.S. Department of the Interior

Office of Surface Mining

Division of Technical Services & Research

State Mining & Mineral Resources and Research Institutes

Washington, D.C. 20240

Quarterly SMMRRI Reports

Grant Recipient	Type of Report	Reporting Period	Control Number(s)
Georgia Institute of Technology	Quarterly Technical	4/1/80-6/30/80	G51004001
Project Title/Program			
Scholarship - Fellowship Program			
Investigator(s) / Fellowships Recipients			
Mr. Jim Kimball (Met.) Continuing fellowship in amount of \$1825.00 per quarter Ms. Cynthia L. A. Neilson (Cer. Eng.) Fellowship in amount of \$600.00 for Spring Quarter Mr. Randall Chapman (Cer. Eng.) Fellowship in amount of \$1225.50 for Spring & Summer Qtrs. Ms. Carolyn Stroop (Ch. Eng.) Scholarship in amount of \$250.50 for Spring Qtr. & \$291.50 for Summer Qtr.			
Performing Organization:			
Georgia Mining and Mineral Resources Institute			
Summary:			
<ol style="list-style-type: none">1. No monies were awarded during period by the University of Georgia.2. Site visit by OSM May 15, 1980.3. Newness of program and existing number of students on DOEd program reflected in number of students shown.			



U.S. Department of the Interior
Office of Surface Mining
Division of Technical Services & Research
State Mining & Mineral Resources and Research Institutes
Washington, D.C. 20240

Quarterly SMMRRI Reports

Grant Recipient	Type of Report	Reporting Period	Control Number(s)
Georgia Institute of Technology	Quarterly Technical	4/1/80-6/30/80	G5104003
Project Title/Program Allotment			
Investigator(s) / Fellowships Recipients John E. Husted, Director			
Performing Organization: Georgia Mining and Mineral Resources Institute (GMMRI)			
Summary: <ol style="list-style-type: none">1. Site visit by OSM on May 15, 1980.2. Attendance at meeting of National Organization of Mineral Institute Directors on May 5, 1980 in Chicago, Ill. in conjunction with attendance at the Mining Congress Coal Show.3. Work in coordinating visits to the Mining Industry of Georgia in cooperation with the Georgia Mining Association.4. Ordered Cone Crusher per approved request in proposal.5. Conferences with administration (GMMRI 2nd funding).6. Request granted for additional space for GMMRI 2nd research facilities.7. Work on coordination of Academic Coal Research and recruiting new personnel.			

GEORGIA INSTITUTE OF TECHNOLOGY
ATLANTA, GEORGIA 30332

OFFICE OF
THE
COMPTROLLER

July 21, 1980

MEMORANDUM

TO: Dr. John Husted
Chemical Engineering

FROM: David V. Welch *DVW*
Grants and Contracts Accounting

RE: U.S. Dept. of Interior - Office of Surface Mining - Quarterly Reports

Enclosed are the following reports for the above for the quarter ended June 30, 1980:

<u>NAME</u>	<u>FORM</u>	<u>GRANT #</u>
Financial Status Report	SF-269	G-5106001
Financial Status Report	SF-269	G-5104003
Fed. Cash Trans. Report	SF-272	Ltr. of Credit #14-18-0530

Please transmit these with the Quarterly Technical Reports.

If you have questions or require additional information, please let us know.

DVW/BITS/jb
cc: U.S.Dept. of Interior Letter of Credit File

FEDERAL CASH TRANSACTIONS REPORT

(See instructions on the back. If report is for more than one grant or assistance agreement, attach completed Standard Form 272-A.)

Approved by Office of Management and Budget, No. 80-RO182

1. Federal sponsoring agency and organizational element to which this report is submitted

U.S. Dept. of Int.-Office of Surface Mining

2. RECIPIENT ORGANIZATION

Name : Georgia Institute of Technology

Number and Street :

City, State and ZIP Code: Atlanta, Georgia 30332

4. Federal grant or other identification number

6. Letter of credit number
14-18-0530

5. Recipient's account number or identifying number

7. Last payment voucher number
4

Give total number for this period

8. Payment Vouchers credited to your account 2

9. Treasury checks received (whether or not deposited)

10. PERIOD COVERED BY THIS REPORT

3. FEDERAL EMPLOYER IDENTIFICATION NO.

58-6002023

FROM (month, day, year)

4/1/80

TO (month, day, year)

6/30/80

11. STATUS OF

FEDERAL

CASH

(See specific instructions on the back)

a. Cash on hand beginning of reporting period

\$ 14,630.31

b. Letter of credit withdrawals

14,000.00

c. Treasury check payments

-0-

d. Total receipts (Sum of lines b and c)

14,000.00

e. Total cash available (Sum of lines a and d)

28,630.31

f. Gross disbursements

28,450.12

g. Federal share of program income

-0-

h. Net disbursements (Line f minus line g)

28,450.12

i. Adjustments of prior periods

-0-

j. Cash on hand end of period

\$ 180.19

12. THE AMOUNT SHOWN ON LINE 11J, ABOVE, REPRESENTS CASH REQUIREMENTS FOR THE ENSUING

-0-Days

13. OTHER INFORMATION

a. Interest income

\$ -0-

b. Advances to subgrantees or subcontractors

\$ -0-

14. REMARKS (Attach additional sheets of plain paper, if more space is required)

5.

CERTIFICATION

certify to the best of my knowledge and belief that this report is true in all respects and that all disbursements have been made for the purpose and conditions of the grant or agreement

AUTHORIZED
CERTIFYING
OFFICIAL

SIGNATURE

DATE REPORT SUBMITTED

July 21, 1980

TYPED OR PRINTED NAME AND TITLE

David V. Welch, Manager, Grants & Contracts Accounting

TELEPHONE

(Area Code)
404

(Number)
894

(Extension)
4624

THIS SPACE FOR AGENCY USE

FEDERAL CASH TRANSACTIONS REPORT

CONTINUATION

This form is completed and attached to Standard Form 272 only when reporting more than one grant or assistance agreement.)

2. RECIPIENT ORGANIZATION (Give name only as shown in item 2, SF 272)

Georgia Institute of Technology
Atlanta, Georgia 30332

Approved by Office of Management and Budget No. 80-RO182

1. FEDERAL SPONSORING AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH THIS REPORT IS SUBMITTED

U.S. Dept. of Interior
Office of Surface Mining

3. PERIOD COVERED BY THIS REPORT (As shown on SF 272)

FROM (month, day, year)

TO (Month, day, year)

4/1/80

6/30/80

List information below for each grant or other agreement covered by this report. Use additional forms if more space is required.

FEDERAL GRANT OR OTHER IDENTIFICATION NUMBER <i>Show a subdivision by other identifying numbers if required by the Federal Sponsoring Agency)</i> (a)	RECIPIENT ACCOUNT NUMBER OR OTHER IDENTIFYING NUMBER (b)	FEDERAL SHARE OF NET DISBURSEMENTS	
		NET DISBURSEMENTS (Gross disbursements less program income received) FOR REPORTING PERIOD (c)	CUMULATIVE NET DISBURSEMENTS (d)
G-5106001	T-86-146/T-87-212	\$ 6,376.00	\$ 6,626.50
G-5104003	E-19-584/E-18-584	22,074.12	39,193.31
TOTALS (Should correspond with amounts shown on SF 272 as follows: column (c) the same as line 11h; column (d) the sum of lines 11h and 11i of this SF 272 and cumulative disbursements shown on last report. Attach explanation of any differences.)		\$ 28,450.12	\$ 45,819.81

FINANCIAL STATUS REPORT <small>(Follow instructions on the back)</small>				1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED		2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER		OMB Approved No. 80-RO180		PAGE OF 1 1 PAGES	
3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code) Georgia Institute of Technology Atlanta, Georgia 30332				4. EMPLOYER IDENTIFICATION NUMBER 58-6002023		5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER T-86-146/T-87-212		6. FINAL REPORT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		7. BASIS * <input checked="" type="checkbox"/> CASH <input type="checkbox"/> ACCRUAL	
				8. PROJECT/GRANT PERIOD (See instructions)				9. PERIOD COVERED BY THIS REPORT			
				FROM (Month, day, year) 12/4/79		TO (Month, day, year) 12/3/80		FROM (Month, day, year) 4/1/80		TO (Month, day, year) 6/30/80	
10. STATUS OF FUNDS											
PROGRAMS/FUNCTIONS/ACTIVITIES ►		(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)			
a. Net outlays previously reported		\$	\$	\$	\$	\$	\$	\$ 250.50			
b. Total outlays this report period								6,376.00 *			
c. Less: Program income credits								-0-			
d. Net outlays this report period (Line b minus line c)								6,376.00			
e. Net outlays to date (Line a plus line d)								6,626.50			
f. Less: Non-Federal share of outlays								-0-			
g. Total Federal share of outlays (Line e minus line f)								6,626.50			
h. Total unliquidated obligations								-0-			
i. Less: Non-Federal share of unliquidated obligations shown on line h								-0-			
j. Federal share of unliquidated obligations								-0-			
k. Total Federal share of outlays and unliquidated obligations								6,626.50			
l. Total cumulative amount of Federal funds authorized								160,000.00			
m. Unobligated balance of Federal funds								153,373.50			
11. INDIRECT EXPENSE	a. TYPE OF RATE N/A (Place "X" in appropriate box) <input type="checkbox"/> PROVISIONAL <input type="checkbox"/> PREDETERMINED <input type="checkbox"/> FINAL <input type="checkbox"/> FIXED					13. CERTIFICATION I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.		SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL TYPED OR PRINTED NAME AND TITLE David V. Welch, Manager Grants & Contracts Accounting		DATE REPORT SUBMITTED 7/21/80 TELEPHONE (Area code, number and extension) 404/894-4624	
	b. RATE		c. BASE		d. TOTAL AMOUNT						
12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation. * Represents charges recorded in the accounting records as of 6/30/80											

FINANCIAL STATUS REPORT

(Follow instructions on the back)

3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code) Georgia Institute of Technology Atlanta, Georgia 30332		1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED U.S. Dept. of Interior - Office of Surface Mining		2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER G-5104003		OMB Approved No. 80-RO180		PAGE OF 1 1 PAGES	
		4. EMPLOYER IDENTIFICATION NUMBER 58-6002023		5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER E-19-584		6. FINAL REPORT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		7. BASIS * <input checked="" type="checkbox"/> CASH <input type="checkbox"/> ACCRUAL	
		8. PROJECT/GRANT PERIOD (See instructions)				9. PERIOD COVERED BY THIS REPORT			
		FROM (Month, day, year) 12/4/79		TO (Month, day, year) 12/3/80		FROM (Month, day, year) 4/1/80		TO (Month, day, year) 6/30/80	
10. STATUS OF FUNDS									
PROGRAMS/FUNCTIONS/ACTIVITIES ►	(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)		
a. Net outlays previously reported	\$	\$	\$	\$	\$	\$	\$ 17,119.19		
b. Total outlays this report period							62,411.44 *		
c. Less: Program income credits							-0-		
d. Net outlays this report period (Line b minus line c)							62,411.44		
e. Net outlays to date (Line a plus line d)							79,530.63		
f. Less: Non-Federal share of outlays							40,337.32		
g. Total Federal share of outlays (Line e minus line f)							39,193.31		
h. Total unliquidated obligations							9,670.00		
i. Less: Non-Federal share of unliquidated obligations shown on line h							-0-		
j. Federal share of unliquidated obligations							9,670.00		
k. Total Federal share of outlays and unliquidated obligations							48,863.31		
l. Total cumulative amount of Federal funds authorized							110,000.00		
m. Unobligated balance of Federal funds							61,136.69		
11. INDIRECT EXPENSE	a. TYPE OF RATE (Place "X" in appropriate box) <input type="checkbox"/> PROVISIONAL <input checked="" type="checkbox"/> PREDETERMINED <input type="checkbox"/> FINAL <input type="checkbox"/> FIXED				13. CERTIFICATION I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.		SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL David V. Welch, Manager Grants & Contracts Accounting		DATE REPORT SUBMITTED July 21, 1980 TELEPHONE (Area code, number and extension) 404/894-4624
	b. RATE 76%	c. BASE S&W	d. TOTAL AMOUNT \$31,349.94	e. FEDERAL SHARE \$ 14,913.10					
12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation. * Represents charges recorded in the Accounting records as of 6/30/80									



U.S. Department of the Interior
Office of Surface Mining
Division of Technical Services & Research
State Mining & Mineral Resources and Research Institutes
Washington, D.C. 20240

Quarterly SMMRRI Reports

1	Grant Recipient	Type of Report	Reporting Period	Control Number(s)
	Georgia Institute of Technology	Quarterly Technical	7/1/80-9/30/80	G5104003
2	Project Title/Program			
3	Investigator(s) / Fellowships Recipients			
	John E. Husted, Director			
4	Performing Organization:			
	Georgia Mining and Mineral Resources Institute			
5	Summary:			
	<ol style="list-style-type: none">1. Thirty-eight mineral producing companies within the state of Georgia were personally visited by the Director in order to:<ol style="list-style-type: none">(a) acquaint them with the program of GMMRI(b) solicit information concerning research needs of each company(c) solicit information concerning their problems(d) determine reaction to company contribution to support of mineral research and education through the GMMRI2. The Advisory Board of GMMRI met September 11, 1980 at Georgia Tech. A copy of the minutes are attached.3. On September 17, 1980 Dr. Husted, while visiting his son in Terre Haute, Indiana, fell backward off a ladder and severely injured the rotator cuff of his left shoulder as well as spraining his right hip area. Major surgery was required. He spent three weeks in hospitals. He returned to work part-time on November 17, 1980; hence the delay of this report.			



U.S. Department of the Interior
Office of Surface Mining
Division of Technical Services & Research
State Mining & Mineral Resources and Research Institutes
Washington, D.C. 20240

Quarterly SMMRRI Reports

1	Grant Recipient	Type of Report	Reporting Period	Control Number(s)
	Georgia Institute of Technology	Quarterly Technical	7/1/80-9/30/80	G51004001
2	Project Title/Program Scholarship - Fellowship Program			
3	Investigator(s) / Fellowships Recipients Mr. Jim Kimball (Met)-Continuing fellowship in amount of \$1866 per quarter Mr. Randall Chapman (Cer. Engr.)-Continuing fellowship in amount of \$1866 per quarter Ms. Carolyn Stroop (Chem. Engr.)-Scholarship for \$291.50 for Summer Quarter Mr. L.M. Mohnkern (Chem. Engr.)-Scholarship for \$291.50 for Fall Quarter (Cont'd below)			
4	Performing Organization: Georgia Mining and Mineral Resources Institute			
5	Summary: <u>Investigator(s)/Fellowships Recipients Continued</u> Mr. Daniel Lovingood (Geol.-Univ. of Ga.) - \$5600 Mr. Thomas Brazen (Geol.-Univ. of Ga.) - \$5600 Mr. Phillip Potter (Geol.-Univ. of Ga.) - \$5600 Mr. William O'Leary (Geol.-Univ. of Ga.) - \$5600 Mr. Jeffery Reid (Geol.-Univ. of Ga.) - \$5983 (Univ. of Ga. awards these on a three-quarter basis)			
5. Summary: 1. Contract with the University of Georgia for \$75,000 for a period of three years - Effective January 1, 1980 and ending December 30, 1983 was completed. 2. Instate tuition increased from \$250.50 per quarter to \$291.50 per quarter, which was included in the				

FEDERAL CASH TRANSACTIONS REPORT

(See instructions on the back. If report is for more than one grant or assistance agreement, attach completed Standard Form 272-A.)

Approved by Office of Management and Budget, No. 80-RO182

1. Federal sponsoring agency and organizational element to which this report is submitted
U.S. Dept. of Int.-Office of Surface Mining

2. RECIPIENT ORGANIZATION

Name : Georgia Institute of Technology

Number and Street :

City, State and ZIP Code : Atlanta, Georgia 30332

3. FEDERAL EMPLOYER IDENTIFICATION NO. ▶ 58-6002023

4. Federal grant or other identification number

5. Recipient's account number or identifying number

6. Letter of credit number
14-18-0530

7. Last payment voucher number
1

Give total number for this period

8. Payment Vouchers credited to your account
1

9. Treasury checks received (whether or not deposited)

10. PERIOD COVERED BY THIS REPORT

FROM (month, day, year)
12/4/79

TO (month, day, year)
3/31/80

11. STATUS OF

FEDERAL

CASH

(See specific instructions on the back)

a. Cash on hand beginning of reporting period

\$ -0-

b. Letter of credit withdrawals

32,000.00

c. Treasury check payments

-0-

d. Total receipts (Sum of lines b and c)

32,000.00

e. Total cash available (Sum of lines a and d)

32,000.00

f. Gross disbursements

17,369.69

g. Federal share of program income

-0-

h. Net disbursements (Line f minus line g)

17,369.69

i. Adjustments of prior periods

-0-

j. Cash on hand end of period

\$ 14,630.31

2. THE AMOUNT SHOWN ON LINE 11J, ABOVE, REPRESENTS CASH REQUIREMENTS FOR THE ENSUING

3 Days

13. OTHER INFORMATION

a. Interest income

\$ -0-

b. Advances to subgrantees or subcontractors

\$ -0-

4. REMARKS (Attach additional sheets of plain paper, if more space is required)

CERTIFICATION

I certify to the best of my knowledge and belief that this report is true in all respects and that all disbursements have been made for the purpose and conditions of the grant or agreement

AUTHORIZED
CERTIFYING
OFFICIAL

SIGNATURE

DATE REPORT SUBMITTED

May 28, 1980

TYPED OR PRINTED NAME AND TITLE

David V. Welch, Manager, Grants & Contracts Acctg.

(Area Code)

(Number)

(Extension)

TELEPHONE

404

894

4624

IS SPACE FOR AGENCY USE

FEDERAL CASH TRANSACTIONS REPORT

CONTINUATION

(This form is completed and attached to Standard Form 272 only when reporting more than one grant or assistance agreement.)

Approved by Office of Management and Budget No. 80-RO182

1. FEDERAL SPONSORING AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH THIS REPORT IS SUBMITTED

U.S. Dept. of Interior
Office of Surface Mining

3. PERIOD COVERED BY THIS REPORT (As shown on SF 272)

FROM (month, day, year)

TO (Month, day, year)

12/4/79

3/31/80

2. RECIPIENT ORGANIZATION (Give name only as shown in item 2, SF 272)

Georgia Institute of Technology
Atlanta, Georgia 30332

4. List information below for each grant or other agreement covered by this report. Use additional forms if more space is required.

FEDERAL GRANT OR OTHER IDENTIFICATION NUMBER (Show a subdivision by other identifying numbers if required by the Federal Sponsoring Agency) (a)	RECIPIENT ACCOUNT NUMBER OR OTHER IDENTIFYING NUMBER (b)	FEDERAL SHARE OF NET DISBURSEMENTS NET DISBURSEMENTS (Gross disbursements less program income received) FOR REPORTING PERIOD (c)	CUMULATIVE NET DISBURSEMENTS (d)
G-5106001	T-86-146/T-87-212	\$ 250.50	\$ 250.50
G-5104003	E-19-584/E-18-584	17,119.19	17,119.19
5. TOTALS (Should correspond with amounts shown on SF 272 as follows: column (c) the same as line 11h; column (d) the sum of lines 11h and 11i of this SF 272 and cumulative disbursements shown on last report. Attach explanation of any differences.)		\$ 17,369.69	\$ 17,369.69

FINANCIAL STATUS REPORT <i>(Follow instructions on the back)</i>			1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED U.S. Dept. of Interior - Office of Surface Mining		2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER G-5104003		OMB Approved No. 80-R0180		PAGE OF 1 1 PAGES		
3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code) Georgia Institute of Technology Atlanta, Georgia 30332			4. EMPLOYER IDENTIFICATION NUMBER 58-6002023		5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER E-19-584/E-18-584		6. FINAL REPORT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		7. BASIS * <input checked="" type="checkbox"/> CASH <input type="checkbox"/> ACCRUAL		
			8. PROJECT/GRANT PERIOD (See instructions)				9. PERIOD COVERED BY THIS REPORT				
			FROM (Month, day, year) 12/4/79		TO (Month, day, year) 12/3/80		FROM (Month, day, year) 12/4/79		TO (Month, day, year) 3/31/80		
10. STATUS OF FUNDS											
PROGRAM /FUNCTIONS/ACTIVITIES ▶		(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)			
a. Net outlays previously reported		\$	\$	\$	\$	\$	\$	\$ -0-			
b. Total outlays this report period								17,119.19 *			
c. Less: Program income credits								-0-			
d. Net outlays this report period (Line b minus line c)								17,119.19			
e. Net outlays to date (Line a plus line d)								17,119.19			
f. Less: Non-Federal share of outlays								-0-			
g. Total Federal share of outlays (Line e minus line f)								17,119.19			
h. Total unliquidated obligations								6,878.33			
i. Less: Non-Federal share of unliquidated obligations shown on line h								-0-			
j. Federal share of unliquidated obligations								6,878.33			
k. Total Federal share of outlays and unliquidated obligations								23,997.52			
l. Total cumulative amount of Federal funds authorized								110,000.00			
m. Unobligated balance of Federal funds								86,002.48			
11. INDIRECT EXPENSE		a. TYPE OF RATE (Place "X" in appropriate box) <input type="checkbox"/> PROVISIONAL <input checked="" type="checkbox"/> PREDETERMINED <input type="checkbox"/> FINAL <input type="checkbox"/> FIXED			13. CERTIFICATION I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.			SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL David V. Welch, Manager Grants & Contracts Acctg.		DATE REPORT SUBMITTED 5/28/80 TELEPHONE (Area code, number and extension) 404/894-4624	
		b. RATE 76%	c. BASE S&W	d. TOTAL AMOUNT \$ 6,360.31							
12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation. * Represents charges recorded in the Accounting Records as of March 31, 1980											

FINANCIAL STATUS REPORT

(Follow instructions on the back)

1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED

U.S. Dept. of Interior - Office of Surface Mining

2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER

G-5106001

OMB Approved
No. 80-RO180

PAGE OF

1 1 PAGES

3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code)

Georgia Institute of Technology
Atlanta, Georgia 30332

4. EMPLOYER IDENTIFICATION NUMBER

58-6002023

5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER

T-86-146/T-87-212

6. FINAL REPORT

☐ YES ☒ NO

7. BASIS *

☒ CASH ☐ ACCRUAL

8. PROJECT/GRANT PERIOD (See instructions)

FROM (Month, day, year)
12/4/79

TO (Month, day, year)
12/3/80

9. PERIOD COVERED BY THIS REPORT

FROM (Month, day, year)
12/4/79

TO (Month, day, year)
3/31/80

10.

STATUS OF FUNDS

PROGRAMS/FUNCTIONS/ACTIVITIES ▶	(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)
a. Net outlays previously reported	\$	\$	\$	\$	\$	\$	\$ -0-
b. Total outlays this report period							250.50 *
c. Less: Program income credits							-0-
d. Net outlays this report period (Line b minus line c)							250.50
e. Net outlays to date (Line a plus line d)							250.50
f. Less: Non-Federal share of outlays							-0-
g. Total Federal share of outlays (Line e minus line f)							250.50
h. Total unliquidated obligations							-0-
i. Less: Non-Federal share of unliquidated obligations shown on line h							-0-
j. Federal share of unliquidated obligations							-0-
k. Total Federal share of outlays and unliquidated obligations							250.50
l. Total cumulative amount of Federal funds authorized							160,000.00
m. Unobligated balance of Federal funds							159,749.50

11. INDIRECT
EXPENSE

a. TYPE OF RATE N/A
(Place "X" in appropriate box) ☐ PROVISIONAL ☐ PREDETERMINED ☐ FINAL ☐ FIXED

b. RATE c. BASE d. TOTAL AMOUNT e. FEDERAL SHARE

12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.
* Represents charges recorded in the accounting records as of

13. CERTIFICATION

I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

TYPED OR PRINTED NAME AND TITLE
David V. Welch, Manager
Grants & Contracts Acctg.

DATE REPORT
SUBMITTED

5/28/80

TELEPHONE (Area code,
number and extension)
404/894-4624

FEDERAL CASH TRANSACTIONS REPORT

(See instructions on the back. If report is for more than one grant or assistance agreement, attach completed Standard Form 272-A.)

Approved by Office of Management and Budget, No. 80-RO182

1. Federal sponsoring agency and organizational element to which this report is submitted

U.S. Dept. of Interior-Office of Surface Mining

2. RECIPIENT ORGANIZATION

Name : Georgia Institute of Technology

Number and Street :

City, State and ZIP Code: Atlanta, Georgia 30332

4. Federal grant or other identification number
see attached

6. Letter of credit number
14-18-0530

5. Recipient's account number or identifying number

7. Last payment voucher number
6

Give total number for this period

8. Payment Vouchers credited to your account

9. Treasury checks received (whether or not deposited)
2

10. PERIOD COVERED BY THIS REPORT

3. FEDERAL EMPLOYER IDENTIFICATION NO. ▶ 58-6002023

FROM (month, day, year)
7/1/80

TO (month, day, year)
9/30/80

11. STATUS OF

FEDERAL

CASH

(See specific instructions on the back)

a. Cash on hand beginning of reporting period

\$ 180.19

b. Letter of credit withdrawals

c. Treasury check payments

13,000.00

d. Total receipts (Sum of lines b and c)

13,000.00

e. Total cash available (Sum of lines a and d)

13,180.19

f. Gross disbursements

15,977.34

g. Federal share of program income

.00

h. Net disbursements (Line f minus line g)

15,977.34

i. Adjustments of prior periods

.00

j. Cash on hand end of period

\$ (2,797.15)

12. THE AMOUNT SHOWN ON LINE 11J, ABOVE, REPRESENTS CASH REQUIREMENTS FOR THE ENSUING

Days

13. OTHER INFORMATION

a. Interest income

\$ -0-

b. Advances to subgrantees or subcontractors

\$ -0-

14. REMARKS (Attach additional sheets of plain paper, if more space is required)

15.

CERTIFICATION

I certify to the best of my knowledge and belief that this report is true in all respects and that all disbursements have been made for the purpose and conditions of the grant or agreement

AUTHORIZED
CERTIFYING
OFFICIAL

SIGNATURE

TYPED OR PRINTED NAME AND TITLE
David V. Welch, Manager
Grants & Contracts Accounting

DATE REPORT SUBMITTED

October 31, 1980

TELEPHONE (Area Code, Number, Extension)

404/894-4624

THIS SPACE FOR AGENCY USE

FEDERAL CASH TRANSACTIONS REPORT

CONTINUATION

(This form is completed and attached to Standard Form 272 only when reporting more than one grant or assistance agreement.)

Approved by Office of Management and Budget No. 80-RO182

1. FEDERAL SPONSORING AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH THIS REPORT IS SUBMITTED

U.S. Dept. of Interior
Office of Surface Mining

3. PERIOD COVERED BY THIS REPORT (As shown on SF 272)

FROM (month, day, year) TO (Month, day, year)
7/1/80 9/30/80

2. RECIPIENT ORGANIZATION (Give name only as shown in item 2, SF 272)

Georgia Institute of Technology
Atlanta, Georgia 30332

4. List information below for each grant or other agreement covered by this report. Use additional forms if more space is required.

FEDERAL GRANT OR OTHER IDENTIFICATION NUMBER (Show a subdivision by other identifying numbers if required by the Federal Sponsoring Agency)	RECIPIENT ACCOUNT NUMBER OR OTHER IDENTIFYING NUMBER	FEDERAL SHARE OF NET DISBURSEMENTS	
		NET DISBURSEMENTS (Gross disbursements less program income received) FOR REPORTING PERIOD	CUMULATIVE NET DISBURSEMENTS
(a)	(b)	(c)	(d)
G-5106001	T-86-146/T-87-212	\$ 3,441.50	\$ 10,068.00
G-5104003	E-19-584/E-18-584	12,535.84	51,729.15

5. TOTALS (Should correspond with amounts shown on SF 272 as follows: column (c) the same as line 11h; column (d) the sum of lines 11h and 11i of this SF 272 and cumulative disbursements shown on last report. Attach explanation of any differences.)

\$ 15,977.34 \$ 61,797.15

FINANCIAL STATUS REPORT

(Follow instructions on the back)

1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED
U.S. Dept. of Interior-Office of Surface Mining

2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER
G-5106001

OMB Approved
No. 80-RO180

PAGE OF
1 1 PAGES

3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code)

Georgia Institute of Technology
Atlanta, Georgia 30332

4. EMPLOYER IDENTIFICATION NUMBER

58-6002023

5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER

T-86-146/T-87-212

6. FINAL REPORT

☐ YES ☒ NO

7. BASIS

* ☒ CASH ☐ ACCRUAL

8. PROJECT/GRANT PERIOD (See instructions)

FROM (Month, day, year)
12/4/79

TO (Month, day, year)
12/3/80

9. PERIOD COVERED BY THIS REPORT

FROM (Month, day, year)
7/1/80

TO (Month, day, year)
9/30/80

10.

STATUS OF FUNDS

PROGRAMS/FUNCTIONS/ACTIVITIES ▶	(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)
a. Net outlays previously reported	\$	\$	\$	\$	\$	\$	\$ 6,626.50
b. Total outlays this report period							3,441.50 *
c. Less: Program income credits							.00
d. Net outlays this report period (Line b minus line c)							3,441.50
e. Net outlays to date (Line a plus line d)							10,068.00
f. Less: Non-Federal share of outlays							.00
g. Total Federal share of outlays (Line e minus line f)							10,068.00
h. Total unliquidated obligations							.00
i. Less: Non-Federal share of unliquidated obligations shown on line h							.00
j. Federal share of unliquidated obligations							.00
k. Total Federal share of outlays and unliquidated obligations							10,068.00
l. Total cumulative amount of Federal funds authorized							160,000.00
m. Unobligated balance of Federal funds							149,932.00

11. INDIRECT EXPENSE	a. TYPE OF RATE N/A (Place "X" in appropriate box) <input type="checkbox"/> PROVISIONAL <input type="checkbox"/> PREDETERMINED <input type="checkbox"/> FINAL <input type="checkbox"/> FIXED			
	b. RATE	c. BASE	d. TOTAL AMOUNT	e. FEDERAL SHARE

13. CERTIFICATION
I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

TYPED OR PRINTED NAME AND TITLE
David V. Welch, Manager
Grants & Contracts Accounting

DATE REPORT SUBMITTED
10/31/80

TELEPHONE (Area code, number and extension)
404/894-4624

12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation. * Represents charges recorded in the accounting records

269-102

as of 9/30/80.

STANDARD FORM 269 (7-76)
Prescribed by Office of Management and Budget
Cir. No. A-110

FINANCIAL STATUS REPORT

(Follow instructions on the back)

1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED U.S. Dept. of Interior-Office of Surface Mining		2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER G-5104003		OIA Approved No. 80-RO180		PAGE 1 OF 1 PAGES	
3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code) Georgia Institute of Technology Atlanta, Georgia 30332		4. EMPLOYER IDENTIFICATION NUMBER 58-6002023		5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER E-19-584/E-18-584		6. FINAL REPORT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
7. BASIS <input checked="" type="checkbox"/> CASH <input type="checkbox"/> ACCRUAL		8. PROJECT/GRANT PERIOD (See instructions) FROM (Month, day, year) 12/4/79 TO (Month, day, year) 12/3/80		9. PERIOD COVERED BY THIS REPORT FROM (Month, day, year) 7/1/80 TO (Month, day, year) 9/30/80			
10. STATUS OF FUNDS							
PROGRAMS/FUNCTIONS/ACTIVITIES ▶	(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)
a. Net outlays previously reported	\$	\$	\$	\$	\$	\$	\$ 79,530.63
b. Total outlays this report period							12,535.84 *
c. Less: Program income credits							.00
d. Net outlays this report period (Line b minus line c)							12,535.84
e. Net outlays to date (Line a plus line d)							92,066.47
f. Less: Non-Federal share of outlays							40,337.32
g. Total Federal share of outlays (Line e minus line f)							51,729.15
h. Total unliquidated obligations							11,568.00
i. Less: Non-Federal share of unliquidated obligations shown on line h							.00
j. Federal share of unliquidated obligations							11,568.00
k. Total Federal share of outlays and unliquidated obligations							63,297.15
l. Total cumulative amount of Federal funds authorized							110,000.00
m. Unobligated balance of Federal funds							46,702.85
11. INDIRECT EXPENSE a. TYPE OF RATE (Place "X" in appropriate box) <input type="checkbox"/> PROVISIONAL <input checked="" type="checkbox"/> PREDETERMINED <input type="checkbox"/> FINAL <input type="checkbox"/> FIXED b. PERCENTAGE 12/4/79-6/30/80 7% BASE as of 7/1/80 73% c. S & W		d. TOTAL AMOUNT 35,259.21		e. FEDERAL SHARE 18,822.37		13. CERTIFICATION I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.	
12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation. Represents charges recorded in the accounting records		SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL TYPED OR PRINTED NAME AND TITLE David V. Welch, Manager Grants and Contracts Accounting		DATE REPORT SUBMITTED October 31, 1980		TELEPHONE (Area code, number and extension) 404/894-4624	

269-102

as of 9/30/80.

STANDARD FORM 269 (7-76)
Prescribed by Office of Management and Budget
Cir. No. A-110



U.S. Department of the Interior
Office of Surface Mining
Division of Technical Services & Research
State Mining & Mineral Resources and Research Institutes
Washington, D.C. 20240

Quarterly SMMRRI Reports

1 Grant Recipient Georgia Mining and Mineral Resources Institute Georgia Institute of Technology Atlanta, GA 30332 (404) 894-2893	Type of Report	Reporting Period 1 Sept 1980 31 Dec 1980	Control Number(s) G-5105019
2 Project Title / Program Structural Location and Role of Hydrogen Ions in Kaolinitie and its Products in Aluminum Removal			
3 Investigator(s) / Fellowships Recipients Young, R.A. Moody, W.E. Patterson, A. Holcomb, D.W. Cagle, J.R.			
4 Performing Organization: School of Physics and School of Ceramic Engineering Georgia Institute of Technology, Atlanta, GA 30332 (404) 894-5208 (404) 894-2853			
5 Summary: 1. OBJECTIVES: The objectives are (1) to determine the mechanistic details by which the structural locations and ordering of the hydrogen ions in kaolinite affect its crystallinity, solubility, viscosity, processing, and use characteristics, (2) to determine the intra-crystalline mechanisms involved in the extraction of aluminum, and (3) to better determine and control the characteristics of the siliceous by-products of aluminum extraction in order that useful products, such as zeolites, may be created from them. 2. APPROACH: Various naturally occurring clay characteristics and various regimens of heating, acid-leaching, deuteration, and irradiation are to be used as variables. Analytical studies will be carried on primarily with x-ray and neutron powder diffraction analyses, especially the Rietveld whole-pattern-fitting-structure-refinement (PFSR) method, and with infrared spectroscopy used in a complementary mode. Shifts in atom site-occupancies, positions and bonding are to be followed. 3. PROGRESS: The principal goal for the first year is to complete at least two-thirds of Phase I and to start preparing samples for Phase II. As stated in the proposal, "Phase I will consist of acquisition of the necessary clays and of adapting and using the PFSR method, both with x-rays and with neutrons, to show that adequate atomic-scale detail can be reliably obtained." The goal for the first quarter was not stated explicitly as such, but, clearly, the implicit goal would be to start up the project, staff up, and to start work on Phase I. This has been done. Since training of graduate students is a stated purpose of the project, the initiation of serious technical work was deliberately held off until a recruiting effort among current graduate students met with some success. Thus, the work really started in the last month of the quarter. Efforts have gone into initial sample collection, literature survey, neutron diffraction apparatus set-up (now operational) and collection of preliminary x-ray diffraction and infrared spectroscopic (i.r.) data on a kaolinite and an acid leaching product.			



U.S. Department of the Interior
Office of Surface Mining
Division of Technical Services & Research
State Mining & Mineral Resources and Research Institutes
Washington, D.C. 20240

Quarterly SMMRRI Reports

Grant Recipient	Type of Report	Reporting Period	Control Number(s)
Georgia Institute of Technology	Quarterly Technical	10/1/80- 12/31/80	G-5104003
Project Title/Program			
Investigator(s) / Fellowships Recipients			
John E. Husted, Director			
Performing Organization:			
Georgia Mining and Mineral Resources Institute			
Summary:			
<p>As reported in the previous quarter's report, Dr. Husted was severely injured on September 17th as a result of a fall from a ladder. He returned to work on a part-time basis on November 17th.</p> <p>He was able to attend the Association of Mineral Institutes meeting held in Tuscon, Arizona, December 9, 1980. With Thanksgiving and Christmas Holidays, Dr. Husted was on duty a total of some three weeks on a part-time basis during the quarter. Much of this time was spent on catching up on events, obtaining an extension of Contract G-5104003 until February 3, 1981, and reviewing equipment needs and obtaining bids on same. Dr. Husted returned essentially full-time on January 5, 1981.</p>			

**U.S. Department of the Interior**

Office of Surface Mining

Division of Technical Services & Research

State Mining & Mineral Resources and Research Institutes

Washington, D.C. 20240

Quarterly SMMRRI Reports

Grant Recipient	Type of Report	Reporting Period	Control Number(s)
Georgia Institute of Technology	Quarterly Technical	10/1/80- 12/31/80	G-51004001
Project Title / Program			
Scholarship-Fellowship Program			
Investigator(s) / Fellowships Recipients			
Mr. Jim Kimball (Met.) Continuing fellowship in amount of \$1866 per quarter			
Mr. Randall Chapman (Cer. Eng.) Continuing fellowship in amount of \$1866 per quarter			
Mr. L.M. Mohnkern (Ch.E.) Scholarship in amount of \$291.50			
Mr. Jeffrey Reid (Geol.-Univ. of Ga.) Ph.D. candidate, 1st of 3 qtrs. @ \$5963 for 3 quarters			
Performing Organization:			
Summary:			
Mr. Thomas Brazell (Geol.-Univ. Ga.) M.S. candidate, 1st of 3 qtrs. @ \$5600 for 3 quarters			
Mr. Daniel Lovingood (Geol.-Univ. Ga.) M.S. candidate, 1st of 3 qtrs. @ \$5600 for 3 quarters			
Mr. William O'Leary (Geol.-Univ. Ga.) M.S. candidate, 1st of 3 qtrs. @ \$5600 for 3 quarters			
Mr. Phillip Potter (Geol.-Univ. Ga.) M.S. candidate, 1st of 3 qtrs. @ \$5600 for 3 quarters			

FEDERAL CASH TRANSACTIONS REPORT CONTINUATION

(This form is completed and attached to Standard Form 272 only when reporting more than one grant or assistance agreement.)

2. RECIPIENT ORGANIZATION (Give name only as shown in item 2, SF 272)

Georgia Institute of Technology
Atlanta, Georgia 30332

Approved by Office of Management and Budget No. 80-RO182

1. FEDERAL SPONSORING AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH THIS REPORT IS SUBMITTED

U.S. Dept. of Interior
Office of Surface Mining

3. PERIOD COVERED BY THIS REPORT (As shown on SF 272)

FROM (month, day, year) TO (Month, day, year)
10/1/80 12/31/80

4. List information below for each grant or other agreement covered by this report. Use additional forms if more space is required.

FEDERAL GRANT OR OTHER IDENTIFICATION NUMBER (Show a subdivision by other identifying numbers if required by the Federal Sponsoring Agency)	RECIPIENT ACCOUNT NUMBER OR OTHER IDENTIFYING NUMBER	FEDERAL SHARE OF NET DISBURSEMENTS	
		NET DISBURSEMENTS (Gross disbursements less program income received) FOR REPORTING PERIOD	CUMULATIVE NET DISBURSEMENTS
(a)	(b)	(c)	(d)
G-5106001	T-86-146/T-87-212	\$ 6,681.29	\$ 16,749.29
G-5104003	E-19-584/E-18-584	7,274.52	59,003.67
G-5105019	E-18-624/G-41/614	.00	.00
G05114003	E-19-502	.00	.00
5. TOTALS (Should correspond with amounts shown on SF 272 as follows: column (c) the same as line 11h; column (d) the sum of lines 11h and 11i of this SF 272 and cumulative disbursements shown on last report. Attach explanation of any differences.)		\$ 13,955.81	\$ 75,752.96

FEDERAL CASH TRANSACTIONS REPORT

(See instructions on the back. If report is for more than one grant or assistance agreement, attach completed Standard Form 272-A.)

Approved by Office of Management and Budget, No. 80-RO182

1. Federal sponsoring agency and organizational element to which this report is submitted

U.S. Dept. of Interior - Office of Surface Mining

2. RECIPIENT ORGANIZATION

Name : Georgia Institute of Technology

Number and Street :

City, State and ZIP Code : Atlanta, Georgia 30332

4. Federal grant or other identification number
See attached

5. Recipient's account number or identifying number

6. Letter of credit number
14-18-0530

7. Last payment voucher number
8

Give total number for this period

8. Payment Vouchers credited to your account
2

9. Treasury checks received (whether or not deposited)

10. PERIOD COVERED BY THIS REPORT

FROM (month, day, year)

TO (month, day year)

3. FEDERAL EMPLOYER IDENTIFICATION NO.

58-6002023

11. STATUS OF

FEDERAL

CASH

(See specific instructions on the back)

a. Cash on hand beginning of reporting period

\$ (2,797.15)

b. Letter of credit withdrawals

25,000.00

c. Treasury check payments

d. Total receipts (Sum of lines b and c)

25,000.00

e. Total cash available (Sum of lines a and d)

22,202.85

f. Gross disbursements

13,955.81

g. Federal share of program income

h. Net disbursements (Line f minus line g)

13,955.81

i. Adjustments of prior periods

j. Cash on hand end of period

\$ 8,247.04

2. THE AMOUNT SHOWN ON LINE 11J, ABOVE, REPRESENTS CASH REQUIREMENTS FOR THE ENSUING

3 Days

13. OTHER INFORMATION

a. Interest income

\$

b. Advances to subgrantees or subcontractors

\$

4. REMARKS (Attach additional sheets of plain paper, if more space is required)

CERTIFICATION

I certify to the best of my knowledge and belief that this report is true in all respects and that all disbursements have been made for the purpose and conditions of the grant or agreement

AUTHORIZED
CERTIFYING
OFFICIAL

SIGNATURE

DATE REPORT SUBMITTED

January 28, 1981

TYPED OR PRINTED NAME AND TITLE

David V. Welch, Manager, Grants & Contracts Accounting

TELEPHONE

(Area Code)
404

(Number)

894-4624

(Extension)

IS SPACE FOR AGENCY USE

FINANCIAL STATUS REPORT

(Follow instructions on the back)

1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED

U.S. Dept. of Interior-Office of Surface Mining

2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER

G-5104003

OMB Approved
No. EO-RO180

PAGE 1 OF 1
PAGES

3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code)

Georgia Institute of Technology
Atlanta, Georgia 30332

4. EMPLOYER IDENTIFICATION NUMBER

58-6002023

5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER

E-19-584/E-18-584

6. FINAL REPORT

☐ YES ☒ NO

7. BASIS

☒ CASH ☐ ACCRUAL

8. PROJECT/GRANT PERIOD (See instructions)

FROM (Month, day, year)
12/4/79

TO (Month, day, year)
12/3/80

9. PERIOD COVERED BY THIS REPORT

FROM (Month, day, year)
7/1/80

TO (Month, day, year)
9/30/80

10.

STATUS OF FUNDS

PROGRAMS/FUNCTIONS/ACTIVITIES ▶	(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)
a. Net outlays previously reported	\$	\$	\$	\$	\$	\$	\$ 79,530.63
b. Total outlays this report period							12,535.84 *
c. Less: Program income credits							.00
d. Net outlays this report period (Line b minus line c)							12,535.84
e. Net outlays to date (Line a plus line d)							92,066.47
f. Less: Non-Federal share of outlays							40,337.32
g. Total Federal share of outlays (Line e minus line f)							51,729.15
h. Total unliquidated obligations							11,568.00
i. Less: Non-Federal share of unliquidated obligations shown on line h							.00
j. Federal share of unliquidated obligations							11,568.00
k. Total Federal share of outlays and unliquidated obligations							63,297.15
l. Total cumulative amount of Federal funds authorized							110,000.00
m. Unobligated balance of Federal funds							46,702.85

11. INDIRECT EXPENSE

a. TYPE OF RATE

(Place "X" in appropriate box)

☐ PROVISIONAL

☒ PREDETERMINED

☐ FINAL

☐ FIXED

b. PERCENTAGE OF BASE

as of 7/1/80 73%

d. TOTAL AMOUNT

35,259.21

e. FEDERAL SHARE

18,822.37

13. CERTIFICATION

I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

TYPED OR PRINTED NAME AND TITLE
David V. Welch, Manager
Grants and Contracts Accounting

DATE REPORT SUBMITTED

October 31, 1980

TELEPHONE (Area code, number and extension)
404/894-4624

12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.

* Represents charges recorded in the accounting records

269-102

as of 9/30/80.

STANDARD FORM 269 (7-76)
Prescribed by Office of Management and Budget
Cir. No. A-110

FINANCIAL STATUS REPORT

(Follow instructions on the back)

3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code) Georgia Institute of Technology Atlanta, Georgia 30332		1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED U.S. Dept. of Interior-Office of Surface Mining		2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER G-5106001		OMB Approved No. 80-RO180		PAGE 1 OF 1 PAGES	
		4. EMPLOYER IDENTIFICATION NUMBER 58-6002023		5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER T-86-146/T-87-212		6. FINAL REPORT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		7. BASIS * <input checked="" type="checkbox"/> CASH <input type="checkbox"/> ACCRUAL	
		8. PROJECT/GRANT PERIOD (See instructions)				9. PERIOD COVERED BY THIS REPORT			
		FROM (Month, day, year) 12/4/79		TO (Month, day, year) 12/3/80		FROM (Month, day, year) 7/1/80		TO (Month, day, year) 9/30/80	
10. STATUS OF FUNDS									
PROGRAMS/FUNCTIONS/ACTIVITIES ►		(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)	
a. Net outlays previously reported		\$	\$	\$	\$	\$	\$	\$ 6,626.50	
b. Total outlays this report period								3,441.50 *	
c. Less: Program income credits								.00	
d. Net outlays this report period (Line b minus line c)								3,441.50	
e. Net outlays to date (Line a plus line d)								10,068.00	
f. Less: Non-Federal share of outlays								.00	
g. Total Federal share of outlays (Line e minus line f)								10,068.00	
h. Total unliquidated obligations								.00	
i. Less: Non-Federal share of unliquidated obligations shown on line h								.00	
j. Federal share of unliquidated obligations								.00	
k. Total Federal share of outlays and unliquidated obligations								10,068.00	
l. Total cumulative amount of Federal funds authorized								160,000.00	
m. Unobligated balance of Federal funds								149,932.00	
11. INDIRECT EXPENSE	a. TYPE OF RATE N/A (Place "X" in appropriate box) <input type="checkbox"/> PROVISIONAL <input type="checkbox"/> PREDETERMINED <input type="checkbox"/> FINAL <input type="checkbox"/> FIXED				13. CERTIFICATION I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.		SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL TYPED OR PRINTED NAME AND TITLE David V. Welch, Manager Grants & Contracts Accounting		DATE REPORT SUBMITTED 10/31/80 TELEPHONE (Area code, number and extension) 404/894-4624
	b. RATE	c. BASE	d. TOTAL AMOUNT	e. FEDERAL SHARE					
12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation. * Represents charges recorded in the accounting records									

as of 9/30/80.



U.S. Department of the Interior
Office of Surface Mining
Division of Technical Services & Research
State Mining & Mineral Resources and Research Institutes
Washington, D.C. 20240

Quarterly SMMRRI Reports

Grant Recipient	Type of Report	Reporting Period	Control Number(s)
Georgia Institute of Technology	Annual Technical	12/4/79-2/3/81	G-51004001
Project Title/Program Scholarship-Fellowship Program			
Investigator(s) / Fellowships Recipients See item 8 below of summary and as attached			
Performing Organization: Georgia Mining and Mineral Resources Institute			

Summary:

1. Designation letter dated December 4, 1979
2. Letter of contract transmissal dated December 17, 1979
3. Contract return dated January 2, 1980
4. Letter of credit in amount of \$160,000 for 3 years received week of March 3, 1980
5. Contract with the University of Georgia for \$75,000 for the \$160,000, effective January 1, 1980 - December 30, 1983 was completed.
6. In-state matriculation fee increased from \$250.50 per quarter to \$291.50, effective Summer Quarter 1980.
7. Internal Advisory Committee of GMMRI functions as the Scholarship-Fellowship Committee. Dr. Helen Grenga represented minority interests.
8. Monies awarded:

Scholarships (Undergraduates)

Mr. Bruce Files (Cer. Engr.): \$1000 for January 1-June 30, 1980
Ms. Carolyn Stroop (Ch.E.): \$250.50 for Spring Quarter and \$291.50 for Summer Quarter 1980
Mr. L. M. Mohnkern (Ch.E.): \$291.50 per quarter for Fall Quarter 1980 through Spring Quarter 1981

Fellowships (Graduate Students)

Mr. Jim Kimball (Met): \$1825 per quarter, beginning Spring Quarter 1980 until completion of Master's degree, anticipated end of Fall Quarter 1981
Mr. Robert Weisgerber (Met): \$230.50 retroactive for Winter Quarter 1980
Ms. Cynthia L. A. Neilson (Cer. Engr.): \$600 for Spring Quarter 1980
Mr. Randall Chapman (Cer. Engr.): \$1225 per quarter for Spring and Summer Quarters 1980; \$1866 per quarter starting Fall Quarter 1980 until completion of Master's degree, anticipated end of Summer Quarter 1981
Mr. Jeffrey Reid (Geol.-Univ. of Ga.): \$5983 for 3 quarters (Fall Quarter 1980-Spring Quarter 1981); Doctoral candidate
Mr. Thomas Brazell (Geol.-Univ. of Ga.): \$5600 for 3 quarters, Fall 1980-Spring 1981; Master's candidate
Mr. Daniel Lovingood (Geol.-Univ. of Ga.): \$5600 for 3 quarters, Fall 1980-Spring 1981; Master's candidate

Georgia Mining and Mineral Resources Institute
Annual Report - Scholarships/Fellowships
Page 2

Mr. William O'Leary (Geol.-Univ. Ga.): \$5600 for 3 quarters, Fall 1980-Spring 1981;
Master's candidate

Mr. Phillip Potter (Geol.-Univ. Ga.): \$5600 for 3 quarters, Fall 1980-Spring 1981;
Master's candidate



U.S. Department of the Interior
Office of Surface Mining
Division of Technical Services & Research
State Mining & Mineral Resources and Research Institutes
Washington, D.C. 20240

Quarterly SMMRRI Reports

Grant Recipient	Type of Report	Reporting Period	Control Number(s)
Georgia Institute of Technology	Annual Technical	12/4/79 - 12/3/80 with extension to 2/3/81	G-5104003

Project Title/Program
Allotment

Investigator(s) / Fellowships Recipients
John E. Husted, Director

Performing Organization:
Georgia Mining and Mineral Resources Institute (GMMRI)

Summary:
Although designation was officially December 4, 1979, the funding letter of credit was received March 27, 1980.

The closing date was also in doubt, but was eventually placed as December 3, 1980. A 90 day extension was requested and granted.

Accomplishments were as follows:

Meetings attended:

1. Called meeting of Directors by OSM - February 1980, Jackson, Mississippi
2. Organizational meeting, National Organization of Mineral Institute Directors (NOMID), AIME annual meeting February 25, 1980, Las Vegas, Nevada
3. New Directors meeting, OSM, Washington, D. C., March 5,6, 1980
4. Sunbelt Consortium of Mineral Institutes, Tuscaloosa, Alabama, March 26, 1980
5. National Organization of Mineral Institute Directors, Chicago, Illinois, May 26, 1980
6. Association of Mineral Institutes (new name for NOMID), Tuscon, Arizona, December 9, 1980

Site visit by Osm on May 15, 1980 with satisfactory report.

Secretary was employed on half-time basis, effective July 1, 1980.

During the Summer 1980, thirty-eight mineral producers in Georgia were visited in order to:

- (a) acquaint them with the program of GMMRI
- (b) solicit information concerning research needs of each company
- (c) solicit information concerning their problems
- (d) determine reaction to a company contribution to support of mineral research and education through the GMMRI.

The External Advisory Board of GMMRI met September 11, 1980. This meeting was covered in detail by the Quarterly report for that period. Recommendations of the Board are being implemented.

Work has progressed very satisfactorily in coordinating GMMRI with both the Georgia Mining Association and the Georgia Rock Association,

Space, 18 x 54 feet (972 sq. ft.), has been assigned and enclosed for a mineral processing laboratory in which to house new and existing equipment. A list of this and other equipment is given as an attachment.

Work has progressed toward formation of a Coal Research Center to be coordinated by GMMRI.

The Administration at Georgia Tech has agreed to permit use of overhead as a matching fund in the 1981-82 budget, as currently being done by most other Mineral Institutes.

As covered in quarterly reports, Dr. Husted was injured in a fall on September 17, 1980, returned to work part time November 17, 1980, and resumed full time January 5, 1981.

In addition to the above, Dr. Husted has been active in working with students, faculty, and the administration to promote education and research for the mineral industries.

Other faculty supported in part and whose salaries were used as matching funds:
(1) Dr. R. F. Hochman, in charge of the Metallurgy degree program in the School of Chemical Engineering and from (2) Dr. J. L. Pentecost, Director of the School of Ceramic Engineering.

The Metallurgy contribution to the Georgia Mining and Mineral Resources Institute has been in formal academic courses in extractive metallurgy and mineral beneficiation plus graduate research ranging from high temperature, high pressure leaching studies, blast furnace operation, etc. to the properties of metallurgical coals. The principals involved in metallurgy, in addition to that of the Director of GMMRI (also Professor of Mineral Engineering in Metallurgy), have been Dr. Robert F. Hochman, Associate Director for Metallurgy, Dr. Pieter Muije and Dr. Helen Grenga. A portion of the metallurgy program's state teaching and research funding has been effectively used as matching funds for GMMRI. Actually a much larger portion of the program's state funding is eligible to match the program because of the close relation of many efforts of the staff to advancing basic extractive and mineral beneficiation programs.

In addition to studies on chromite leaching and the properties of coal, funded by the program, close cooperation has produced industry related work in the development of improved blast furnace operation, shaft type melting furnace operation, continuous casting and rolling of steel, and the development of new alloy white cast iron for mining applications. This 3 pronged approach of education, governmental supported research and industrial supported studies now provides a base for development of our chemical metallurgy program.

In the Neutron Diffraction Study of Kaolinite Structure conducted by Drs. Pentecost and Moody of Ceramic Engineering, well crystallized samples of kaolinite were examined by neutron diffraction. The classic model of the structure of kaolinite did not explain adequately the observed diffraction patterns. Work to modify the model and to examine the thermal degradation behavior of kaolinite are continuing. It is expected that an improved model for the kaolinite structure will result from this effort.

Equipment for Mineral Processing
Georgia Tech

5 x 6 Denver Jaw Crusher
Lab size Gyratory Crusher (Allis-Chalmers-McCully)
*Morgardsgammar Cone Crusher
18 x 36 Denver Ball Mill
*Batch Ball Mill (Denver)
*Batch Rod Mill (Denver)
*Lab Double Roll Crusher (Denver)
Braun Pulverizer
Ro-tap
18" Sweco Triple Deck Screens
*1 x 4 Foot Double Deck Denver Vibrating Screen
*Denver Jig
Carpco Magnetic Scalper
Carpco High Intensity Roll Magnetic Separator
Carpco High Intensity Electrostatic Separator
Humphrey Spiral
2 - Model 12 Denver Flotation Cells
Wemco Flotation Cell (in bad condition)
Galhiger Flotation Cell (in Ceramic Engineering)
*Solvent Extraction Unit
*40 kw electric furnace for extractive metallurgy (\$15,000 contribution)

*On approved list in proposal. Morgardshammar Cone Crusher is on hand. Other equipment is on order with delivery promised by end of April 1981. Equipment without asterick was already owned by Georgia Tech.

FINANCIAL STATUS REPORT <small>(Follow instructions on the back)</small>			1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED		2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER		OMB Approved No. 80-R0180	PAGE 1	OF 1	
3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code) Georgia Institute of Technology Atlanta, Georgia 30332			4. EMPLOYER IDENTIFICATION NUMBER 58-6002023		5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER T-86-146/T-87-212/AF-94381		6. FINAL REPORT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		7. BASIS <input checked="" type="checkbox"/> CASH <input type="checkbox"/> ACCRUAL	
			8. PROJECT/GRANT PERIOD (See instructions)				9. PERIOD COVERED BY THIS REPORT			
			FROM (Month, day, year) 12/4/79		TO (Month, day, year) 2/3/81		FROM (Month, day, year) 12/4/79		TO (Month, day, year) 12/31/80	
10. STATUS OF FUNDS										
PROGRAMS/FUNCTIONS/ACTIVITIES ►		(a) Undergraduate Scholarship	(b) Graduate Fellowship	(c) Post-Doctoral Fellowship	(d) Administrative Activity & Support	(e)	(f)	TOTAL (g)		
a. Net outlays previously reported		\$	\$	\$	\$	\$	\$	\$		
b. Total outlays this report period		1,833.50	16,111.49	2,951.88	.28			20,897.15		
c. Less: Program income credits		-0-	-0-	-0-	-0-			-0-		
d. Net outlays this report period (Line b minus line c)		1,833.50	16,111.49	2,951.88	.28			20,897.15		
e. Net outlays to date (Line a plus line d)		1,833.50	16,111.49	2,951.88	.28			20,897.15		
f. Less: Non-Federal share of outlays		-0-	-0-	-0-	-0-			-0-		
g. Total Federal share of outlays (Line e minus line f)		1,833.50	16,111.49	2,951.88	.28			20,897.15		
h. Total unliquidated obligations		-0-	11,199.00	-0-	-0-			11,199.00		
i. Less: Non-Federal share of unliquidated obligations shown on line h		-0-	-0-	-0-	-0-			-0-		
j. Federal share of unliquidated obligations		-0-	11,199.00	-0-	-0-			11,199.00		
k. Total Federal share of outlays and unliquidated obligations		1,833.50	27,310.49	2,951.88	.28			32,096.15		
l. Total cumulative amount of Federal funds authorized								160,000.00		
m. Unobligated balance of Federal funds								127,903.85		
11. INDIRECT EXPENSE	a. TYPE OF RATE N/A (Place "X" in appropriate box) <input type="checkbox"/> PROVISIONAL <input type="checkbox"/> PREDETERMINED <input type="checkbox"/> FINAL <input type="checkbox"/> FIXED				13. CERTIFICATION I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.		SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL TYPED OR PRINTED NAME David V. Welch, Manager, Grants & Contracts Acctg.		DATE REPORT SUBMITTED 3/30/81	
	b. RATE	c. BASE	d. TOTAL AMOUNT	e. FEDERAL SHARE						
12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.									TELEPHONE (Area code, number and extension) 404/894-4624	